IN THE CLAIMS

1. (Currently Amended) A therapeutic ultrasound system, comprising:

an ultrasonic transducer which irradiates a therapeutic ultrasound having a frequency from 1 MHz to 10 MHz on a region to be coagulated by heat of said therapeutic ultrasound;

an input unit to which information of irradiation of said therapeutic ultrasound is inputted, said information including a continuous insonation time of said therapeutic ultrasound;

a control unit to which said information is inputted and which controls irradiation of said therapeutic ultrasound;

a sound detector which detects, during exposure of said therapeutic ultrasound, an audible sound generated in said region to be coagulated;

a waveform analyzing unit which obtains a cross-correlation function between a waveform of the detected audible sound and a typical waveform of an audible sound previously obtained, during irradiation of said therapeutic ultrasound, in a region to be coagulated; and

a unit which detects a point of time of detection of the audible sound using said cross-correlation function, and which sends a signal expressing detection of the audible sound to said control unit,

wherein said ultrasonic transducer is controlled by said control unit to irradiate said therapeutic ultrasound having a frequency from 1 MHz to 10 MHz on said region to be coagulated, from said point of time of detection of the audible sound by said sound detector until expiration of said continuous insonation time.

2-3. (Canceled).

4. (Currently Amended) A therapeutic ultrasound system, comprising:

an ultrasonic transducer which irradiates a therapeutic ultrasound having a frequency from 1 MHz to 10 MHz on a region to be coagulated by heat of said therapeutic ultrasound;

an input unit to which information of irradiation of said therapeutic ultrasound is inputted, said information including a continuous insonation time of said therapeutic ultrasound;

a control unit to which said information is inputted and which controls irradiation of said therapeutic ultrasound;

a sound detector which detects, during exposure of said therapeutic ultrasound, an audible sound generated in said region to be coagulated;

a signal processing unit which obtains a FFT spectrum of said audible sound before a start of irradiation of said therapeutic ultrasound and a FFT spectrum of said audible sound after the start of irradiation of said therapeutic ultrasound; and

a unit which detects a point of time of detection of the audible sound by comparing the FFT spectrum before the start of irradiation of said therapeutic ultrasound with the FFT spectrum after the start of irradiation of said therapeutic ultrasound,

wherein said ultrasonic transducer is controlled by said control unit to irradiate said therapeutic ultrasound <u>having a frequency from 1 MHz to 10 MHz</u> on said region to be coagulated, from said point of time of detection of the audible sound by said sound detector until expiration of said continuous insonation time.

5. (Canceled)

6. (Previously presented) A therapeutic ultrasound system according to Claim 4, wherein said unit calculates a first integrated value of the FFT spectrum before the start of irradiation of said therapeutic ultrasound in a preset

frequency interval and a second integrated value of the FFT spectrum after the start of irradiation of said therapeutic ultrasound in said preset frequency interval, and detects said point of time of detection of the audible sound by comparing said first integrated value with said second integrated value.

7. (Previously presented) A therapeutic ultrasound system according to Claim 6, wherein said preset frequency interval is 250 Hz to 550 Hz.

8. (Previously presented) A therapeutic ultrasound system according to Claim 4, wherein said unit detects said point of time of detection of the audible sound by comparing a signal level at a particular frequency of the FFT spectrum before the start of irradiation of said therapeutic ultrasound with a signal level at said particular frequency of the FFT spectrum after the start of irradiation of said therapeutic ultrasound.

9. (Currently amended) A therapeutic ultrasound system, comprising:

an ultrasonic transducer which irradiates a therapeutic ultrasound having a frequency from 1 MHz to 10 MHz on a region to be coagulated by heat of said therapeutic ultrasound;

an input unit to which information of irradiation of said therapeutic ultrasound is inputted, said information including a continuous insonation time of said therapeutic ultrasound;

a control unit to which said information is inputted and which controls irradiation of said therapeutic ultrasound;

a sound detector which detects, during exposure of said therapeutic ultrasound, an audible sound generated in said region to be coagulated;

a signal processing unit which obtains a FFT spectrum of the detected audible sound;

a waveform analyzing unit which obtains a cross-correlation function between the FFT spectrum of the detected audible sound and a typical FFT spectrum of a typical waveform of an audible sound previously obtained, during irradiation of said therapeutic ultrasound, in a region to be coagulated; and

a unit which detects a point of time of detection of the audible sound using said cross-correlation function and sends

a signal expressing detection of the audible sound to said control unit,

wherein said ultrasonic transducer is controlled by said control unit to irradiate said therapeutic ultrasound having a frequency from 1 MHz to 10 MHz on said region to be coagulated, from said point of time of detection of the audible sound by said sound detector until expiration of said continuous insonation time.

10. (Previously presented) The therapeutic ultrasound system according to Claim 1, wherein said sound detector detects audible sound in the range of 200 to 900 Hz.